

LPTV Station KADF-LP • NTSC Channel 20 • Austin, Texas

Justification for Waiver of Section 74.705(b)(5) (32-km N±2, N±3, N±4 Spacing Requirement)

KADF-LP is 0.19 kilometers from full-service TV Station KLRU, Channel N18, Austin, and is also 0.19 km from full-service TV Station KVUE, Channel N24, Austin. Therefore, a waiver is required of Section 74.705(b)(5) of the FCC Rules, which normally requires a minimum separation of 32 km between an above 50 kW effective radiated power (ERP) Low Power Television (LPTV) station and an N±2, N±3 or N±4 channel full-service TV station.

The N±2, N±3 and N±4 channel 32-km spacing requirement for LPTV stations with ERPs of greater than 50 kW exists because of the possibility of third-order intermodulation (IM) products being generated in the front ends of NTSC television receivers, as a result of the combined signal powers for the N and N±2, N±3 and/or N±4 signals. It should be noted that this IM interference threat is not to the Channel N or Channel N±2, N±3 or N±4 stations, but rather to reception of TV signals removed from the source channels by 2, 3 or 4 channels. For example, KADF-LP, N20, and KVUE, N24, would create interference threats to reception four channels below Channel 20 (*i.e.*, Channel 16) and to reception four channels above Channel 24 (*i.e.*, Channel 28). Similarly, KADF-LP, N20, and KLRU, N18, would create interference threats to two channels below Channel 18 (*i.e.*, Channel 16) and two channels above Channel 20 (*i.e.*, Channel 22).

There are no full-service Channel 16, 22 or 28 analog TV stations serving the Austin market. The closest full-service analog Channel 16 station is KEDT, Corpus Christi, TX, at 297 km distant. The closest full-service analog Channel 22 station is KLTJ, Galveston, TX, at 273 km distant. The closest full-service analog Channel 28 station is KORO, Corpus Christi, at 290 km. There is a local full-service DTV station, KLRU-DT, D22, but DTV reception is protected only against co-channel and first-adjacent channel signals; that is, Section 74.705(b)(5), pertaining to N±2, N±3 and N±4 channel full-service *analog* stations, does not apply to full-service *DTV* stations. Similarly, and because of their lower maximum powers, there are no N±2, N±3 or N±4 minimum spacing requirements to Class A TV stations, TV translator stations, or other LPTV stations.

Accordingly, there is no predicted interference, and waiver of Section 74.705(b)(5) of the FCC Rules is therefore appropriate.

